DESCRIPTION OF MODIFICATIONS TO ANALYSIS OF CENTRAL VALLEY PROJECT OPERATIONAL ALTERNATIVES

INTRODUCTION

On June 24, 2003, the Western Area Power Administration (Western) issued a Federal Register Notice outlining post 2004 Operational Alternatives for the Central Valley Project (CVP). The Federal Register Notice noted that to maintain operational flexibility for the CVP and to implement the 2004 Power Marketing Plan, Western is considering three Operational Alternatives for post 2004 Operation of the CVP:

- Form a Federal Control Area (FCA),
- Become a Participating Transmission Owner (PTO) in the California Independent System Operator (CAISO); and
- Operate within the CAISO as a "Metered Subsystem" (MSS).

On July 9, 2003, Western held a Public Information Forum in which it presented to interested parties various aspects associated with the three Operational Alternatives. One of the aspects of the Public Information Forum was a presentation and discussion of a comparative cost analysis performed by Navigant Consulting Inc. (Navigant Consulting) associated with each CVP Operational Alternative. Interested parties were also given an opportunity to comment on the Operational Alternatives at a Public Comment Forum held on July 30, 2003. In addition to the verbal comments that were provided at the Public Information Forum and the Public Comment Forum, interested parties could provide written comments on the Operational Alternatives to Western through August 8, 2003.

Recognizing both the verbal and written comments received from interested parties during the comment period, modifications were made to the comparative cost analysis. This write-up provides a description of the major modifications or adjustments that were made to the comparative cost analysis presented at the July 9, 2003 Public Information Forum. Accordingly, it also provides a summary of the updated results associated with the revised cost analysis.

MODIFICATIONS TO INITIAL ANALYSIS

Although a variety of comments were received on a range of topics related to the Operational Alternatives under consideration by Western, this document only focuses on those comments that served as modifications or updates to initial comparative costs analysis. The following outlines and describes the major modifications that were made to the initial analysis to refine the comparative costs analysis in light of comments received as a part of the public comment period.

1. *Escalation of Western's Operating Costs under the Operational Alternatives:* The CAISO provided a comment pertaining to Western's estimated operating costs under the Operational Alternatives, addressing an issue that the CAISO costs are escalated annually while Western's operating costs are held constant. In light of this comment, the initial analysis has been adjusted to reflect an annual cost increase in Western's operating costs of 3 percent annually over the study period.

2. *Escalation of Western's Transmission Revenue Requirement under the Operational Alternatives:* Recognizing CAISO comments on the adjustment of CAISO transmission charges, the initial analysis has been adjusted to reflect an annual cost increase in Western's Transmission Revenue Requirement of 3 percent annually over the study period to account for increasing labor and material expenses.

3. *Ancillary Service Requirements under the Federal Control Area Alternative:* The CAISO provided a comment related to the treatment of self-provided ancillary services, noting that the operating reserve requirements under the Federal Control Area Alternative would likely exceed the levels assumed in the CAISO control area. The CAISO notes that self-provision of ancillary services under the Federal Control Area Alternatives should be based on Western's single largest contingency. In recognition of this comment, the initial analysis has been modified to reflect ancillary service requirements under the Federal Control Area Alternative based on Western's largest contingent unit rather than on historical reserve margins in the CAISO control area.

4. *Application of Reliability Service Charge to Directly Connected Loads under the CAISO PTO Alternative:* The CAISO provided comments pertaining to the application of Pacific Gas and Electric's (PG&E) Reliability Services (RS) charge to Western customers that are directly connected to Western's transmission system under the CAISO PTO Alternative. Although PG&E has continued to indicate that its intent is to pass through some or all of its RS costs to all Western Customers, it is possible that loads directly connected to Western's transmission system may be exempt from RS charges. The initial analysis has been revised to assume that the application of RS charges does not apply to directly connected loads of Western under the CAISO PTO Alternative.

5. *Application of Inter-Zonal Congestion Charges on the California-Oregon Intertie:* The CAISO provided a comment suggesting that the use of Firm Transmission Rights (FTRs) can be used to hedge a portion of the Inter-Zonal congestion charges on the California-Oregon Intertie (COI).

This comment was reviewed and it was determined that it may not be possible to recover 100 percent of the usage charges on COI through the allocation of FTRs. Recognizing that the FTR allocation under the CAISO Access Charge is still subject to litigation and that some parties have challenged the FTR allocation to new PTOs, it is uncertain that FTRs will be allocated to Western on a long-term basis. However, despite this uncertainty, the assumption used in the initial analysis has been modified to reflect that 80 percent of Inter-Zonal congestion charges on the COI are recovered from an FTR allocation through 2010. Under the CAISO cost structure, the FTR allocation for existing transmission contracts will expire at the end of 2010.

6. *Transmission Revenues from Sale of Transmission Capacity on the California-Oregon Intertie:* The initial analysis included cost estimates under the Federal Control Area Alternatives associated with purchase of the transmission facilities between Malin and Round Mountain. Although these costs, both capital and operation and maintenance costs, were reflected in the cost components, revenues from sales of excess transmission capacity associated with those transmission facilities were not reflected in the initial analysis. The initial analysis has been modified to reflect revenues from sales of excess transmission capacity on the facilities between Malin and Round Mountain. The sales revenues are assumed to be equal to the annualized capital and annual operation and maintenance costs for those transmission facilities.

7. *Modifications to Western's Annual Operating Expenses under the CAISO PTO and Federal Control Area Alternative:* The initial analysis included estimates for Western's operations costs and capitalized expenses under the Operational Alternatives. In light of comments received as a part of the Public Information Forum and Public Comment Period, the initial estimates for Western's operating expenses have been modified as shown below in Figure 1. Note that these figures do not include baseline costs for maintenance activities that would be the same under each Operational Alternative.

Figure 1
Summary of Annual Operating Expenses
by CVP Operational Alternative
($000)

Category	**CAISO PTO**	**MSS**	**FCA**
Annual Operating Expenses	$10,136	$16,160	$17,901
Annualized Capital Expenses	$2,770	$3,682	$6,253
Total Annual Expenses	$12,906	$19,842	$24,154

One-Time Expenses *	$1,300	$4,867	$5,327

** Incurred in 2005 only.*

Modifications to the annual operating costs include reducing Western's costs under the CAISO PTO to reflect the removal of a Transmission Scheduling and Security Desk, adjusting one-time expenses in 2005 to account for formation costs associated with the MSS and Federal Control Area Alternative, as well as other marginal modifications to Western's estimates for IT systems and overall operating expenses.

SUMMARY OF UPDATED RESULTS

Figure 2 provides a summary of the results of the updated comparative cost analysis. The benefits and costs associated with each Operational Alternative vary each year. The estimates in Figure 2 summarize the 15-year present worth values, in 2004 dollars, and discounted at a rate of 5.625 percent. These figures compare the relative costs under each Operational Alternative and do not necessarily reflect the actual costs that Western would need to recover from its customers for ratemaking purposes.

Figure 2
Summary of Costs by CVP Operational Alternative
over 15-Year Study Period
(2004 Dollars $000)

Category	CAISO PTO	MSS	FCA Group A	FCA Group B	FCA Group C	FCA Group D
Costs	$983,745	$851,528	$906,983	$900,749	$899,854	$628,127
Benefits	$877,465	$763,059	$812,027	$812,027	$812,027	$812,027
Net Benefit / (Cost)	($106,281)	($88,469)	($94,567)	($88,723)	($87,827)	$183,899
Savings Versus CAISO PTO *	$0	$17,812	$11,324	$17,558	$18,453	$290,180

** Savings represent avoided costs compared to operating under the CAISO PTO Alternative.*

Over the 15-year study period, the MSS Alternative provides an estimated savings of approximately $17.8 million compared to the CAISO PTO Alternative. The savings under the Federal Control Area Alternative range from approximately $11.3 million under the Group A scenario, $17.6 million under the Group B scenario, and $18.5 million under the Group C scenario. Savings under the FCA Group D Scenario are estimated to be approximately $290 million over the study period.

Tables 1 - 15 provide a summary of the benefits and costs, in nominal values, for each year of the 15-year study period.